Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

COMMENTARY

THE AMERICAN JOURNAL of MEDICINE®

The Taming of the Flu: Lessons from the Tragedy of COVID-19 and the Absence of an Influenza Season

VIEWPOINT

The Coronavirus disease 2019 (COVID-19) pandemic has brought numerous comparisons with influenza. The significant loss of life and impact on society has provoked comparisons with the 1918 influenza pandemic. When we were still learning about the severity of the severe acute respiratory syndrome coronavirus 2 infection, parallels were drawn with seasonal influenza, although we now have data showing COVID-19 to be of greater consequence.[1] Regardless of the differences, influenza remains an important cause of morbidity and mortality, causing an estimated 114,000 to 624,000 hospitalizations and 5000 to 27,000 deaths yearly in the United States.[2] The estimated total economic burden of influenza to the United States is $11.2 billion per year, with significant contributions from direct and indirect costs.[3] While these numbers may pale in comparison with the devastating impact of COVID-19, they represent the reality of the impact of influenza, even in the presence of widely available (if imperfect) vaccines and antiviral medications. While we hope to control the COVID-19 pandemic through increased availability of vaccines and therapeutics, history suggests that influenza will continue to leave a mark on society moving forward.

During the early fall of 2020, the Mayo Clinic began discussing what a worst-case scenario of a "twindemic" might look like, if a traditional influenza season arrived amid an ongoing COVID-19 surge. The concern was that even a typical influenza season may overwhelm health care resources already stretched thin by the COVID-19 pandemic. Accordingly, a multidisciplinary group consisting of experts in infectious diseases, clinical microbiology, internal medicine, pediatrics, nursing, and information technology, among others, began preparing a strategy. It was decided that the best approach was to develop a multifaceted algorithm to facilitate testing of symptomatic patients for influenza, COVID-19, and, if indicated, Respiratory Syncytial Virus and group A *Streptococcus*. The ability to empirically prescribe oseltamivir for individuals at high risk for influenza complications was prepared, in the event that test positivity rates suggested widespread transmission. A primary goal in this effort was to avoid duplication of efforts and resource use (eg, collection of multiple clinical samples, repeat health care visits if a patient tested negative for COVID-19) in an already strapped health care system. After hundreds of hours of discussion and collaboration to design the algorithm and establish the operational details, the combined testing algorithm was implemented in early December of 2020.

Eventually, our efforts proved to be much ado about nothing. After 19,305 tests were performed between December 7, 2020 and January 15, 2021, we unceremoniously discontinued the combined testing approach, due to a complete lack of influenza cases (ie, 0 positive influenza tests) in our local patient population. The teams built to manage the expected incoming positive influenza results were quietly disbanded and returned to their previous roles. The electronic testing algorithms were dismantled. The nursing protocol to prescribe oseltamivir to our high-risk elderly and immunocompromised patients was never used. System-wide notices were sent out, announcing the return to our normal symptomatic testing strategy. While the tragedy of COVID-19 continued to impact our community, the feared "twindemic" never happened. Nationally and internationally, the influenza season was nearly absent, as well. Since September, there has been one pediatric influenza death reported nationwide, compared with an average of over 175 pediatric deaths during each of the last 3 influenza seasons.[4]

What lessons can be learned from this experience of absence? The relative absence of an influenza season during

Funding: None.

Conflicts of Interest: AJT reports receiving honoraria from UpToDate.com for medical writing, unrelated to this work. MB reports that he is an Advisory board member for DiaSorin Molecular, LLC, unrelated to this work. BT is the recipient of a K23 award from the National Institutes of Health (K23-AG051679) not related to this work, and reports no potential conflicts of interest.

Authorship: All authors jointly developed the concept of this manuscript. AJT wrote the initial draft, with all authors providing substantive and critical revisions of the manuscript.

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https://doi.org/10.1016/j.amjmed.2021.04.023

the pandemic restrictions should fundamentally change the way we approach future influenza seasons, both generally and specifically in the health care setting. First and foremost, society must recognize the impact of mask-wearing in reducing the burden of certain infectious diseases, within health care organizations as well as in community settings.[5] Wearing a mask is an inexpensive intervention with few downsides. We would suggest that each year when influenza is first recognized in a community (ie, through broad testing strategies) universal mask-wearing should be encouraged when individuals are in a public setting. In the health care setting, universal mask-wearing for health care workers and outpatients should become a norm during each influenza season and could play an important role in reducing nosocomial transmission of respiratory pathogens. Like employee influenza vaccine programs, mask-wearing requirements in the health care setting are ethically justified to protect vulnerable individuals from a life-threatening disease like influenza. It should no longer be considered acceptable to have unmasked, symptomatic individuals in waiting rooms and other health care settings when there is a simple and effective measure to keep other patients and staff safe.

Secondly, rather than priding themselves in showing up at work sick, health care professionals in general, and physicians in particular, should lead the effort to combat presenteeism during illness. The principle of non-malfeasance should be honored by the avoidance of potentially transmitting life-threatening illnesses to our vulnerable patients and colleagues. These efforts are necessary at both an organizational and national level to avoid unnecessary transmission of influenza as well as other infectious diseases. For example, organizations should develop policies to support continued pay for ill staff and simplify requirements for sick leave notes.[6] On a national level, social safety net programs should be strengthened to allow individuals who do not have sick leave coverage to remain home without fear of losing their job.

Finally, the pandemic has demonstrated the feasibility of teleworking as well as working while caring for dependents. We should seek to make that option available, whenever possible and at short notice. Providing a telework option can decrease the number of days worked while ill[7] and will decrease the temptation to send sick children to school or daycare. However, government at the local, state, and federal levels must work to promote broad access to high-speed internet to avoid the workplace and educational inequalities that emerged during the COVID-19 pandemic. While the cost of universal high-speed internet may seem significant, it pales in comparison to the economic impact of influenza-related morbidity and mortality.[3]

The COVID-19 pandemic has taken much from the global society. The extraordinary loss of life, missed educational opportunities, and economic damage will be felt for years to come. Strangely enough, the broad mitigation measures (ie, masking, social distancing, remote work/school, limited travel) put in place due to COVID-19 appear to have also resulted in the relative absence of influenza during the 2020-2021 influenza season. While the future of COVID-19 remains unclear, it's likely that influenza will return and result in significant morbidity and mortality worldwide. If we ignore the lessons that the COVID-19 pandemic has offered, we will be compounding tragedy upon tragedy.

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